

Learning Outcomes for Grade 5
January 2020

Math: Standards:

- 5.NF.A.1 Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.
- 5.NF.A.2 Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers
- 5.NF.B.4a Interpret the product $(a/b) \times q$ as a parts of a partition of q into b equals parts; equivalently, as a result of a sequence of operations $a \times q/b$. For example, use a visual fraction model to show $(2/3) \times 4 = 8/3$, and create a story context with this equation. Do the same with $(2/3) \times (4/5) = 8/15$. (In general, $(a/b) \times (c/d) = ac/bd$.)
- 5.NF.B.4b Find the area of a rectangle with fractional side lengths by tiling it with unit squares of the appropriate unit fraction side lengths, and show that the area is the same as would be found by multiplying the side lengths. Multiplying fractional side lengths to find areas of rectangles, and represent fraction products as rectangular areas.
- 5.NF.B.5a Comparing the size of a product to the size of 1 factor on the basis of the size of the other factor, without performing the indicating multiplication.
- 5.NF.B.5b Explaining why multiplying a given number by a fraction greater than 1 results in a product greater than the given number (recognizing multiplication by whole numbers greater than 1 as a familiar case); explaining why multiplying a given number by a fraction less than 1 results in a product smaller than a given number; and relating the principle of fraction equivalence $a/b = (n \times a)/(n \times b)$ to the effect of multiplying a/b by 1.
- 5.NF.B.6 Solve real world problems involving multiplication of fractions and mixed numbers e.g., by using visual fraction models or equations to represent the problems
- 5.NF.B.3 Interpret a fraction as division of the numerator by the denominator ($a/b = a \div b$). Solve word problem involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret $3/4$ as the result of dividing 3 by 4, noting that $3/4$ multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size $3/4$. If 9 people want to share a 50-lbs sack of rice equally by weight, how many lbs of rice should each person get? Between what two whole numbers does your whole answer lie.
- 5.NF.B.7a Interpret division of a unit fraction by a non zero whole number, and compute such quotients. For example, create a story context for $(1/3) \div 4$, and use a visual fraction model to show the quotient. Use the relationship between multiplication and division to explain that $(1/3) \div 4$ equals $1/12$ because $(1/12) \times 4 = 1/3$.
- 5.NF.B.7b Interpret division of a whole number by a unit fraction, and compute such quotients. For example, create a story context for $4 \div (1/5)$, and usual a visual fraction

model to show the quotient. Use the relationship between multiplication and division to explain $4 \div (1/5)$ equals 20 because $20 \times (1/5)$ equals 4.

- 5.NF.B.7c Solve real world problems involving division unit fractions by non zero whole numbers and division of whole numbers by unit fractions, e.g., by using visual fraction models to represent the problem. For example, how much chocolate will each person get when each person shares a $1/2$ pound of chocolate equally? How many $1/3$ cup servings are in 2 cups of raisins?

Reading: Standards: 5R4

- **Literature and Informational Standard:** Determine the meaning of words and phrases, figurative language, academic, and content-specific words and analyze their effect on meaning, tone, or mood.

Writing:

- 5W3 Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Academic Vocabulary:

- Mood, Factor, Effect, Emphasize

Social Studies: Standards:

- 5.5 Across time and place, the people of the Western Hemisphere have held differing beliefs regarding power, authority, governance, and law resulting in dynamic periods of colonial rule, revolutions, and state building.
- 5R4 Determine the meaning of words and phrases, figurative language, academic, and content-specific words and analyze their effect on meaning, tone, or mood.

Science:

- Describe how soil is formed and kinds of soil.
- Understand how soil is used and polluted.

Science Lab:

- Design charts, tables, graphs, and other representations of observations in conventional and creative ways to help them address their research question or hypothesis.

Technology with Miss Rappo

- **CCSS.ELA-Literacy. W.5.6**

With guidance and support from adults, use technology including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of two pages in a single sitting.

Physical Education

- Standard 1 - Personal Health and Fitness
- Standard 2 - A Safe and Healthy Environment
- Standard 3 - Resource Management

Music

- Students apply understanding of elements of music through performance activities.
- Students build and apply vocal and instrumental (percussion) technique.
- Students identify music in elements, notation, vocabulary, genre and style.

